

JAN 14 2016

Mr. Paul Rosasco
Engineering Management Support, Inc.
7220 West Jefferson Avenue, Suite 406
Lakewood, Colorado 80235

Dear Mr. Rosasco:

The U.S. Environmental Protection Agency has reviewed the Draft Abbreviated Work Plan for Remedial Investigation Addendum and Final Feasibility Study at the West Lake Landfill Operable Unit-1 Superfund Site, dated December 18, 2015; and OUTLINE, dated, December 1, 2015. Enclosed are the EPA's comments on these document submittals.

In accordance with the RI/FS Administrative Order on Consent, please provide the EPA with a revised Work Plan that incorporates the requested changes within 15 working days of your receipt of these comments (this is an extension at EPA's discretion to the original 10 calendar day deadline, as allowed for under the terms of the SOW schedule). The EPA's comments on the OUTLINE should be incorporated into your changes to the work plan and there is no need to resubmit the OUTLINE.

If you have any comments or questions, or would like to schedule a call or meeting to discuss EPA's comments, please feel free to contact me either by e-mail at vann.bradley@epa.gov or by phone at 913-551-7611.

Sincerely,

Bradley Vann
Remedial Project Manager
Missouri/Kansas Remedial Branch
Superfund Division

Enclosure

cc: Ryan Seabaugh, Missouri Department of Natural Resources

SUPR/MOKS

Vann
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Administrative Comments to text:

1. Acronym List: Please revise the text by adding the following new term “CSM” for Conceptual Site Model. Please revise the text by adding the following term to the Acronym List: “IB” for Isolation Barrier, and delete the acronym “IBAA” (both from page 9).
2. Page 1, Section 1.1 - Purpose, Objectives and Scope, The document states: “The work to be conducted pursuant to this work plan will be performed in accordance with the National Contingency Plan, 40 CFR Part 300 and the following EPA guidance:” In addition to the guidance documents listed, the following are relevant to the scope of proposed work and should be considered for use:
 - USEPA Risk Assessment Guidance for Superfund (RAGS)
 - Institutional Controls: A Site Manager’s Guide to Identifying, Evaluating and Selecting Institutional Controls at Superfund and RCRA Corrective Action Cleanups, OSWER 9355.0-74FS-P
 - EPA/630/R-95/002F, April 1998, Guidelines for Ecological Risk Assessment (Published on May 14, 1998, Federal Register 63(93):26846-26924)
 - OSWER Directive No. 9355.7-04 Land Use in the CERCLA Remedy Selection Process
3. Section 1.1, first paragraph, last sentence: “... were completed are described ...” Please change the word “are” to “as” or “and are”.
4. Page 3, Section 2, first paragraph, 4th sentence, please revise the sentence as follows: “*OU-1 also includes an adjacent sub-parcel that was previously referred to as the Ford property...*”.
5. Page 9, Section 2.3, middle of second paragraph, please revise the sentence to include the acronym “IB” after the term “Isolation Barrier”. Please delete the acronym “IBAA” from this page/section as it is only used once.
6. Page 21, Section 4.5, FFS Preparation, the document states: “A potential outline for the SFS Report is as follows:” The reference to the SFS should be changed to FFS.
7. While the EPA understands that the current/updated set of hydrogeology information, groundwater data, and ongoing studies and issues related to fate and transport at the site will be documented and summarized in the OU-1 RI/FFS addendum, this work plan should also indicate to the readers that a third Operable Unit (OU-3) will be added to the site by the EPA for addressing groundwater at the site. Please add this information to the Introduction section of this document.

Specific Review Comments to text:

1. Page 1, Section 1.1, numbered bullets, bullet 1, please clarify and state in this bullet or add another bullet that states the Conceptual Site Model (CSM) will also be updated as a part of the RI/FFS addendum work.
2. Page 2, Section 1.1, Purpose, Objectives and Scope, recommend including a list of EPA Risk Assessment Guidance documents used to update the HHRA. Please consult and include the, “Radiation Risk Assessment at CERCLA Sites: Q&A”, OSWER Directive 9200.4-40 (May 2014).

3. Page 3, Section 2, the definitions for OU-1 and OU-2 are inconsistent with the 2008 RODs. Please revise the text accordingly.
4. Page 3, Section 2, second paragraph, first sentence, please delete the first sentence that specifies the site has been split into two Operable Units. The EPA plans to include a third Operable Unit (OU-3) to address groundwater at the site. The process of adding an OU for the site is currently underway by the EPA. Suggest inserting the following sentence to the paragraph to explain this to readers as follows: *“EPA is currently planning a third Operable Unit (OU-3) to the West Lake Landfill site to address groundwater at the site.”*
5. Section 2.1 – 2008 ROD Selected Remedy for OU-1. The document states: “The components of the ROD-selected remedy include the following:” however the provided list is inconsistent with the components as listed in the OU1 ROD. Please review the components as stated in the OU-1 ROD and revise Section 2.1 as appropriate (Section 12.2, Description of the Selected Remedy).
6. Page 6, Section 2.2, 1st full paragraph discussing air quality monitoring, please add that air quality monitoring also occurred at the residential area known as Spanish Village through July 30, 2015.
7. Page 6, Section 2.2, 2nd full paragraph discussing additional characterization, please specify that one of the objectives of the additional characterization of Areas 1 and 2 was to support updated RIM volume calculations.
8. Page 7, Section 2.2, Post-ROD Site Investigations, as a reminder, the baseline risk assessment is an analysis of the potential adverse health effects (current or future) caused by hazardous substance releases from a site in the absence of any actions to control or mitigate these releases (i.e., under an assumption of no action). While additional data related to the non-combustible cover may be required or generated, this data set should not delay the submittals associated with the RI Addendum or FFS process.
9. Page 7, Section 2.2, 2nd full paragraph starting with “EPA is undertaking laboratory testing...”, the scope, methods, and extent of the EPA laboratory “heating” study mentioned in this paragraph have not been fully determined to date. Until the study has been scoped and implemented by the EPA it seems premature to reference the potential heating study in this document. Please delete this paragraph and other references to the heating study from the RI Addendum/FFS work plan.
10. Page 7, Section 2.2, 3rd full paragraph, 2nd sentence, which reads “In addition, EPA has suggested that once the cover is installed, additional radon flux testing could be performed...” Please note that the EPA believes this testing should not delay the submittals associated with the RI Addendum nor FFS process.
11. Page 8, Section 2.3, numbered bullets (1 through 6) regarding additional evaluations and subsequent paragraph discussing the evaluations, please note that moving forward and at the EPA's direction, item 1 will be resolved by the Area 1 and 2 fieldwork and that nothing further is required to address it and should be reflected in the subsequent paragraph. No further work is required on item 2, as it has been resolved per the AOC SOW RI/FFS. Items 4 and 5 (deliverables) per AOC will be incorporated into the FFS without further need to resubmit those deliverables. Item 6 will be combined with future groundwater work to be performed under a separate action not related to OU-1 for approval and completion. Please revise the numbered bullets accordingly.

12. Page 9, Section 2.3, last paragraph of the section; which states “As previously discussed, pursuant to the UAO issued...” While the EPA supports considering the effects of the cover on the remedial alternatives for OU-1, the RI Addendum and FFS process for OU-1 should not be delayed by the non-combustible cover action or submittals associated with that action.
13. Pages 11 and 12, Section 3, numbered bullets, bullet 6, please include a sentence or statement that reflects that the updated/revised boundary line(s) for OU-1 as related to the newly defined extent of RIM at the site will be in the RI Addendum.
14. Page 12, Section 3, numbered bullets, bullet 6, please include a new bullet and/or additional text that provides a better description of the “changes to the conditions on the former Ford property”, that will be included in the RI Addendum/FFS.
15. Page 12, Section 3, numbered bullets, bullet 7a, 4th sub-bullet, please revise this bullet as follows;
“Post ROD data will be included in the RI Addendum relevant to OU1; however, extensive updates to the existing groundwater discussions for the site will be addressed under a new Operable Unit for the site, which will be designated as OU-3.”
16. Page 12, Section 3, numbered bullets, bullet 7b, last sentence, please delete the following portion of the last sentence of this bullet” ...and, if available, the results of EPA’s testing of the thermal effects on radionuclide leaching.”
17. Page 13, Section 3, numbered bullets, bullets 8.b and 8c, this bullet should be revised to mention the RI addendum will include consideration of the results of surface water and or sediment samples if they are available at the time of the development and submittal of the RI Addendum.
18. Page 13, Section 3.1, Item 9b, please provide the rationale for the assertion that revisions to the ecological evaluation are not anticipated, or state that an update to the ecological risk evaluation will be completed consistent with current EPA guidance and based on newly collected nature and extent of contamination information.
19. Page 13, Section 3.1, RI Updates and Revisions, 9, Baseline Risk Assessment Summary, additional detail is needed to understand what will be provided in the update. Recommend stating that an updated CSM, an updated table of exposure parameters, and an updated table of toxicity values will be provided.
20. Page 13, Section 3.2, BRA Updates. 1 a, Compare maximum concentrations to Screening Level Concentrations, the comparison should be to the most recent update to the Regional Screening Level (RSL) Tables (currently November 2015). <http://www.epa.gov/risk/risk-based-screening-table-generic-tables>
21. Page 13, Section 3.2, BRA Updates. 1 b, Select Chemicals of Concern (COCs) and compare to previous COC list, initial selection of Chemicals of Potential Concern (COPCs) should be based on comparison of maximum concentrations to RSLs. The HHRA will then identify Chemicals of Concern (COCs).
22. Page 14, Section 3.2, BRA Updates. 2 c, Evaluate whether new information changes the exposure pathways identified in the accepted CSM, recommend that the newly developed CSM, includes new

information presented as a figure. For example, make updates to Figure A.3-1: Conceptual Model presented in the April 24, 2000 Appendix A Baseline Risk Assessment West Lake Landfill Operable Unit 1 document, as appropriate.

23. Page 14, Section 3.2, BRA Updates. 3b, calculate UCLs using ProUCL statistical software version 5.0.00. <http://www.epa.gov/land-research/proucl-software>
24. Page 14, Section 3.2, BRA Updates. 4 a, Updated Toxicity Assessment, recommend updating exposure parameters based on current guidance (e.g., OSWER Directive 9200.1-120) and toxicity values based on the most current toxicological information. Also, re-evaluate the exposure parameters used in the original BRA (e.g., are the storage worker and groundskeeper exposure parameters still valid).
25. Section 3.2, BRA Updates. 5 a, Use the EPA web-based risk calculators to calculate risks to target receptors from baseline conditions, Page 14. It is unclear how the results will be presented. Region 7 recommends spreadsheets showing the calculations as shown in RAGS Part D, <http://www.epa.gov/risk/superfund-risk-assessment#basic> . Please clarify how the calculations/ results will be presented. In addition, risk should be calculated using the most current EPA risk assessment guidance. For example, since the BRA was conducted, RAGS Part F (Inhalation) and RAGS Part E (Dermal) have been developed.
26. Page 15, Section 4 – Final Feasibility Study, please include the explanation for why uranium and other radionuclides are not being used for the listed alternatives.
27. Page 15, Section 4, Item 6 states: “2008 ROD-Selected Remedy (Former Alternative L4) – Containment consisting of regrading and installation of a new landfill cover as described in Section 2.1.” The alternative listed “L4” is a portion of the 2008 ROD selected remedy. In the OU-1 ROD, alternative F4 was also selected for the Buffer Zone/Crossroads Property. Please include F4 in this section to align with Section 12.0 of the OU-1 ROD.
28. Page 15, Section 4, first sentence of the first paragraph, the text in this section states that seven remedial alternatives are to be evaluated in addition to the No Action alternative. The list of bullets in the section includes the No Action Alternative but in total only has six remedial options listed, please reconcile the number of alternatives and/or the text in the first paragraph of this section.
29. Page 15, Section 4, numbered bullets, please note “The sum-of-ratios technique/approach” should be used when addressing clean-up goals for a mix of radionuclides.
30. Page 16, Section 4.1.1., Additional Technology Evaluations, bullets, please add a bullet that discusses the consideration of Apatite Treatment Technologies for the site to this section. Please also inform readers that this technology may be further considered and/or implemented under the pending new operable unit, OU-3.
31. Page 16, Section 4.1.2, 3rd bullet of the section, please provide additional information to the 3rd bullet to better describe what extreme weather conditions and other potential vulnerabilities will be considered by the additional evaluation(s), such as earthquakes, flooding, tornados, etc.
32. Page 16, Section 4.1.2, 4th bullet of the section, please remove the words “or near” from the last bullet in this section.

33. Page 17, Section 4.2.1, numbered bullet 1, please clarify or better explain how the conceptual (site) model mentioned in this section ties in with the CSM required in the RI Addendum.
34. Page 18, Section 4.2.1, the text states, "As any partial excavation remedy will, by definition, leave subsurface deposits of radionuclides in-place, an alternative method of dose and risk assessment is required. RESRAD 7.06 is proposed to be used to evaluate doses and risks associated with RIM that is not included within the scope of any partial excavation alternative." Please be advised that the "Radionuclide Preliminary Remediation Goals for Superfund electronic calculator" has been updated and now includes the option to "*select a soil thickness cover layer*" <http://epa-prgs.ornl.gov/radionuclides/>. If electing to use RESRAD 7.0 or any alternative approach, please refer to the 2014 Radiation Risk Assessment Q&A (Q10, page 12).
35. Page 19, Section 4.2.2, 3rd full paragraph, last sentence, please change the wording from "geostatistical methods may be used ..." to "geostatistical methods will be used ...".
36. Page 20, Section 4.3, the document states: "State acceptance will be evaluated based on comments provided by MDNR on the SFS." Please change the text to state that State acceptance will be evaluated based on comments and feedback provided by MDNR as part of the Final Feasibility Study (FFS) and the Proposed Plan.
37. Figures Section, Figure 2, the Crossroads Lot 2A-2 is not shown on Figure 2. Also, the Buffer Zone is not shown to be within Operable Unit 1 (blue line). The boundaries of Operable Unit 2 do not match the boundaries provided in the OU-2 Record of Decision (ROD). Please update the figure accordingly.
38. Section 4.5, FFS Preparation. Item C., Principal Threat Waste Analysis, please provide additional information regarding the appendix content.

-Beginning of comments for OUTLINE for RI Addendum/FFS Study Work Plan-
West Lake Landfill Operable Unit-1

Administrative Comments to OUTLINE:

39. Note subsequent specific OUTLINE comments do not require resubmission of a revised OUTLINE, but should be considered and as appropriate included within the pending draft document submittals.

Specific Review Comments to OUTLINE:

40. Please add an additional subsection 2.1.6 or as appropriate, titled "*Conceptual Site Model*". A new CSM will be updated as a part of the RI/FFS addendum work.
41. Section 2.5, page 1, please add a new Section to the OUTLINE, 2.5.5 or as appropriate, titled "*Summary of changes/updates to the previous BRA*". This section would be used to provide a brief narrative summary of all/any significant changes made to the BRA from the previous version.
42. Section 3.1.1.4, page 1, "SSE Evaluation", please revise the OUTLINE text for this subsection as follows: "*SSE Evaluation and Isolation Barrier*". Please ensure the text of this section includes a brief discussion of the pending/on-going IB related design and field work.
43. Section 3.1.1.5, page 1, "Tornado Evaluation". Please revise the OUTLINE text for this subsection as follows: "*Climate Change Considerations*". EPA expects that this section will include a consideration or summary of potential impacts/scenarios for climate change and for potential extreme events/weather events such as tornados, flooding, earthquake, etc.
44. Section 3.3.2.3.3 and 3.3.2.3.4, page 2, please combine these two OUTLINE subsection items into a single item titled as follows; 3.3.2.3.3 "*Potential Effects of Climate Change*". Please include climate change events, and weather evaluations including tornados in this section.
45. Section 3.5.8.2 and 3.5.8.3, page 4, please combine these two OUTLINE subsection items into a single item titled as follows; 3.5.8.2 "*Climate Change Evaluations*". Please include the weather and other event evaluations including tornados in this section.
46. Page 4, Section 3.5 Appendices, it appears that not all of the Appendix subsections are included in the OUTLINE (A, C, D, E). Please check and revise the OUTLINE in regard to the planned Appendix information as appropriate. Note resolution to comment #38 above, with regards to Appendix C (Principal Threat Waste Analysis) may also impact change for this comment.